HDS IR Bullet Camera

User Manual

Thank you for purchasing our product. If there are any questions, or requests, please do not hesitate to contact the dealer.

This manual may contain several technical incorrect places or printing errors, and the content is subject to change without notice. The updates will be added to the new version of this manual. We will readily improve or update the products or procedures described in the manual.

DISCLAIMER STATEMENT

"Underwriters Laboratories Inc. ("UL") has not tested the performance or reliability of the security or signaling aspects of this product. UL has only tested for fire, shock or casualty hazards as outlined in UL's Standard(s) for Safety, UL60950-1. UL Certification does not cover the performance or reliability of the security or signaling aspects of this product. UL MAKES NO REPRESENTATIONS, WARRANTIES OR CERTIFICATIONS WHATSOEVER REGARDING THE PERFORMANCE OR RELIABILITY OF ANY SECURITY OR SIGNALING RELATED FUNCTIONS OF THIS PRODUCT.

Regulatory Information

FCC Information

FCC compliance: This equipment has been tested and found to comply with the limits for a digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful

interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the users will be required to correct the interference at their own expense.

FCC Conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.

2. This device must accept any interference received, including interference that may cause undesired operation.

EU Conformity Statement

CE This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC, the RoHS Directive 2011/65/EU.

2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information, please see: www.recyclethis.info.

2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union.

See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information, please see: www.recyclethis.info.

Safety Instruction

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss.

The precaution measure is divided into “Warnings” and “Cautions”

Warnings: Serious injury or death may occur if any of the warnings are neglected.

Cautions: Injury or equipment damage may occur if any of the cautions are neglected.

WarningsFollow these safeguards to prevent serious injury or death.	**Cautions** Follow these precautions to prevent potential injury or material damage.

Warnings

- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region.
- Please refer to technical specifications for detailed information.
- Input voltage should meet both the SELV (Safety Extra Low Voltage) and the Limited Power Source with AC 24V or DC 12V according to the IEC60950-1 standard. Please refer to technical specifications for detailed information.
- Do not connect several devices to one power adapter as adapter overload may cause over-heating or a fire hazard.
- Please make sure that the plug is firmly connected to the power socket.
- When the product is mounted on wall or ceiling, the device shall be firmly fixed.
- If smoke, odor or noise rise from the device, turn off the power at once and unplug the power cable, and then please contact the service center.
- If the product does not work properly, please contact your dealer or the nearest service center. Never attempt to disassemble the camera yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)

Cautions

- Make sure the power supply voltage is correct before using the camera.
- Do not drop the camera or subject it to physical shock.
- Do not touch senor modules with fingers. If cleaning is necessary, use clean cloth with a bit of ethanol and wipe it gently. If the camera will not be used for an extended period, please replace the lens cap to protect the sensor from dirt.
- Do not aim the camera at the sun or extra bright places. Blooming or smearing may occur otherwise (which is not a malfunction), and affect the endurance of sensor at the same time.
- The sensor may be burned out by a laser beam, so when any laser equipment is in using, make sure that the surface of sensor will not be exposed to the laser beam.
- Do not place the camera in extremely hot, cold (the operating temperature shall be -10℃~+60℃), dusty or damp locations, and do not expose it to high electromagnetic radiation.
- To avoid heat accumulation, good ventilation is required for operating environment.
- Keep the camera away from liquid while in use.
- While in delivery, the camera shall be packed in its original packing, or packing of the same texture.
- Improper use or replacement of the battery may result in hazard of explosion. Replace with the same or equivalent type only. Dispose of used batteries according to the instructions provided by the battery manufacturer.

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1 Introduction

1.1 Product Features

This series of camera adopts high-sensitive sensor and advanced circuit board design technology. It features high resolution, low distortion, and low noise features, etc., which make it extremely suitable for surveillance system and image process system.

The main features of HD-SDI IR Bullet cameras are as follows:

- 2 Megapixel high-performance CMOS sensor;
- Clear and detailed image of up to 1080p resolution;
- Support SDI and CVBS output which is used for convenient image debugging;
- Low illumination: 0.01Lux @ (F1.2,AGC ON), 0 Lux with IR;
- IR cut filter auto switch;
- Auto white balance, auto gain control, and backlight compensation for different surveillance environment;
- Support Digital Wide Dynamic Range (D-WDR) for backlighting surveillance;
- OSD menu, parameters are configurable;
- Ingress protection level reaches IP66.

1.2 Overview

1.2.1 Overview of Type I HD-SDI Bullet Camera

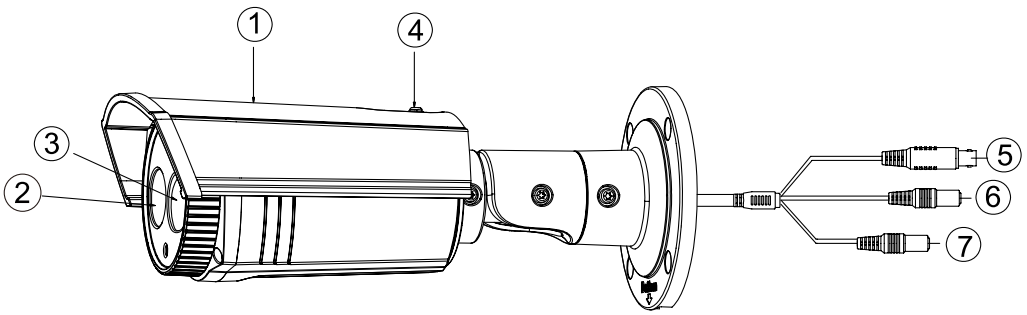

Figure 1-1 Overview of Type I HD-SDI IR Bullet Camera

Table 1-1 Description

No.	Description	No.	Description
1	Sun Shield	5	Power Cable
2	Lens	6	HD-SDI Cable
3	IR LED	7	CVBS Cable
4	Adjustable Screw		

1.2.2 Overview of Type II HD-SDI Bullet Camera

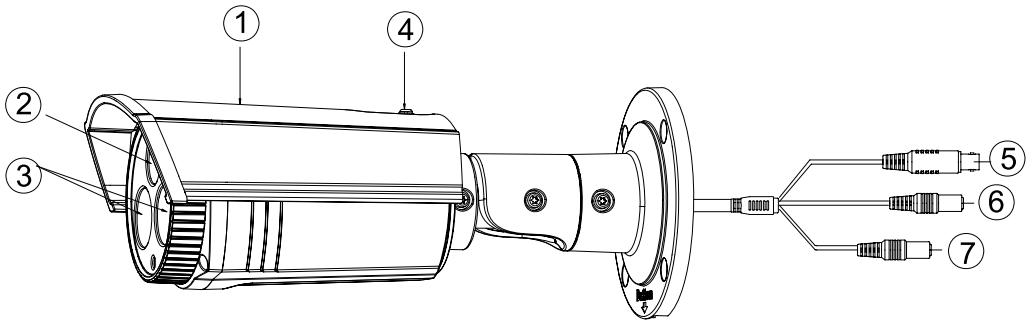

Figure 1-2 Overview of Type II HD-SDI IR Bullet Camera

Table 1-2 Description

No.	Description	No.	Description
1	Sun Shield	5	Power Cable
2	Lens	6	HD-SDI Cable
3	IR LED	7	CVBS Cable
4	Adjustable Screw		

1.2.3 Overview of the Type III HD-SDI Bullet Camera

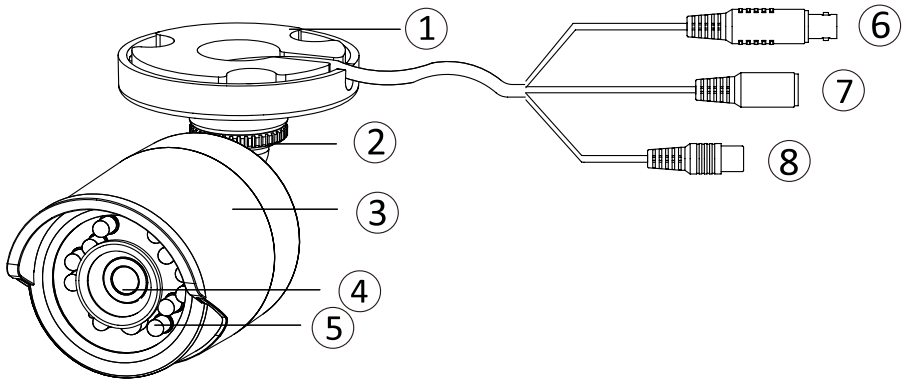

Figure 1-3 Overview of Type III HD-SDI IR Bullet Camera

Table 1-3 Description

No.	Description	No.	Description
1	Mounting Base	5	IR LED
2	Adjustable Nut	6	HD-SDI Cable
3	Sun Shield	7	Power Cable
4	Lens	8	CVBS Cable

2 Installation

Before you start:

- Please make sure that the device in the package is in good condition and all the assembly parts are included.
- Make sure that all the related equipment is power-off during the installation.
- Check the specification of the products for the installation environment.
- Check whether the power supply is matched with your required power voltage to avoid damage.
- If the product does not function properly, please contact your dealer or the nearest service center. Do not disassemble the camera for repair or maintenance by yourself.
- Please make sure the wall is strong enough to withstand three times the weight of the camera.
- If the wall is the cement wall, you need to insert expansion screws before you install the camera. If the wall is the wooden wall, you can use self-tapping screw to secure the camera.

2.1 Installation of Type I&II HD-SDI IR Bullet Camera

- As Type I and Type II HD-SDI IR Bullet Cameras are in the same structure, their installation steps are the same.

- Both wall mounting and ceiling mounting are suitable for type I and type II HD-SDI IR bullet camera. Wall mounting will be taken as an example in the section. And you can take steps of wall mounting as a reference if ceiling mounting is adopted.

Steps:

1. Drill the screw holes on the wall according to the drill template.

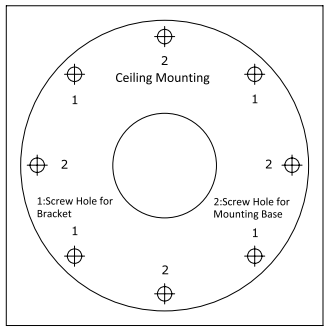

Figure 2-1 Drill Template

2. Route the corresponding cables.
3. Fix the camera to the wall with supplied screws.

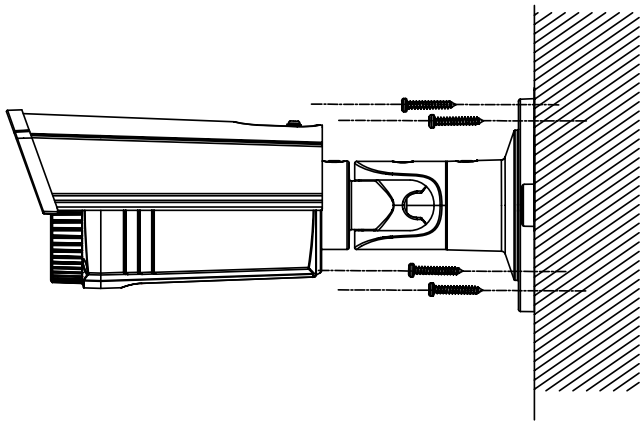

Figure 2-2 Secure the Camera to the Wall

4. Connect the corresponding power/HD-SDI/CVBS cables.
5. Adjust the Lens.
   1). Loosen screw 1 to adjust the pan direction [0°~360°]. Tighten the screw after completing the adjustment.
   2). Loosen screw 2 to adjust the tilt direction [0°~100°]. Tighten the screw after completing the adjustment.
   3). Loosen screw 3 and rotate the camera [0°~360°] to adjust the lens to the surveillance angle. Tighten the screw after completing the adjustment.

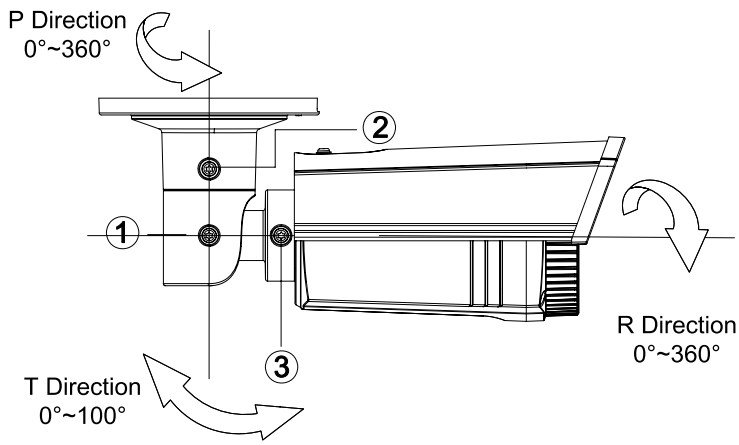

Figure 2-3 3-axis Adjustment

2.2 Installation of Type III HD-SDI IR Bullet Camera

Both wall mounting and ceiling mounting are suitable for type III HD-SDI IR bullet camera. Ceiling mounting will be taken as an example in the section. And you can take steps of ceiling mounting as a reference if wall mounting is adopted.

Steps:

1. Drill the screw holes in the ceiling according to the drill template.

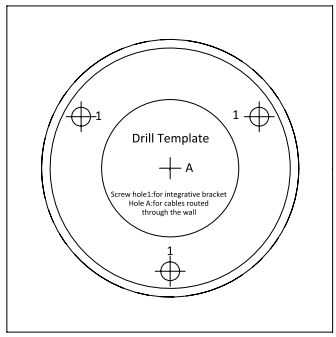

Figure 2-4 Drill Template

2. Route the corresponding cables.

3. Secure the camera to the ceiling with the supplied PA4 Screws.

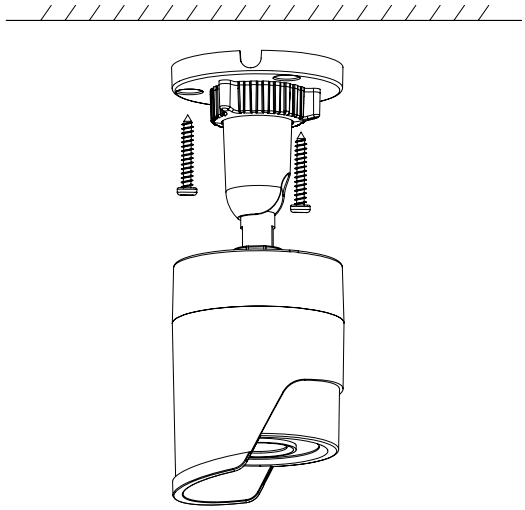

Figure 2-5 Secure the Camera to the Ceiling

4. Connect the corresponding power/HD-SDI/CVBS cables.

5. Adjust the Lens.

   1). Loosen the adjustable nut.

2). Adjust the pan direction [0°~360°].

3). Adjust the tilt direction [0°~90°].

4). Rotate the camera [0~360°] to adjust the lens to the surveillance angle.

5). Tighten the adjustable nut to complete the installation.

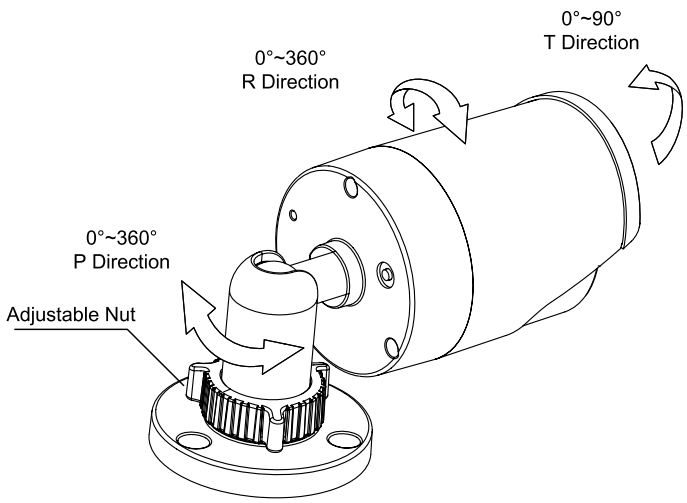

Figure 2-6 3-axis Adjustment